

## 10. Jorge

**Program Name: Jorge.java**

**Input File: jorge.dat**

Jorge has just learned to play poker, but has some trouble remembering the different hand rankings. He has decided to write a program to help, but needs your assistance in writing it.

He has decided to represent each card using a unique number from 1 to 52, with the diamonds numbered from 1-13, hearts from 14-26, spades 27-39, and clubs 40-52. Card #1 is the Ace of Diamonds, #2 the Two of Diamonds, #13 the King of Diamonds, #14 the Ace of Hearts, and so on. Card #52 is the King of Clubs.

His program will input the five numbers of his hand, and will tell him what his best hand is, according to the rules of poker, the rankings of which are, in order of best to worst:

- FOUR OF A KIND - all four of the same kind, like four 2s or four Kings.
- FULL HOUSE - three of one kind and two of another, like three 8s and two Aces.
- FLUSH - five cards, all of the same suit, like five spades or five diamonds, in no particular order.
- STRAIGHT - five cards, of at least two different suits, all in a row, like Ace, 2, 3, 4, 5, or 10, Jack, Queen, King, Ace, or any sequence somewhere in the middle of the suit. Wraparound sequences, like Queen, King, Ace, 2, 3, do not count as a straight.
- THREE OF A KIND - three of one kind, like three 7s or three Jacks.
- TWO PAIRS - 2 different pairs of the same kind, like two 5s and two 9s.
- PAIR - one pair of the same kind, like two 4s or two Kings.
- NONE - a terrible hand indeed...you should fold, immediately, unless you are a good bluffer!

**Note:** *Neither a Straight Flush or Royal Flush will be considered for this problem.*

**Input:** Several poker hands of five cards each, represented by five integers, all on one line, separated by single spaces, according to the description above.

**Output:** The best poker hand for each set of five cards, as shown in the description above and examples below.

**Sample input:**

```
18 44 7 21 23
18 44 31 22 38
18 44 31 34 21
18 44 31 5 9
```

**Sample output:**

```
PAIR
THREE OF A KIND
FULL HOUSE
FOUR OF A KIND
```